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CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society Of America

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FIG. 1. Part of the exhibit of "The Cactus Donnellys" of Daly City, California.

CACTUS AND SUCCULENT JOURNAL

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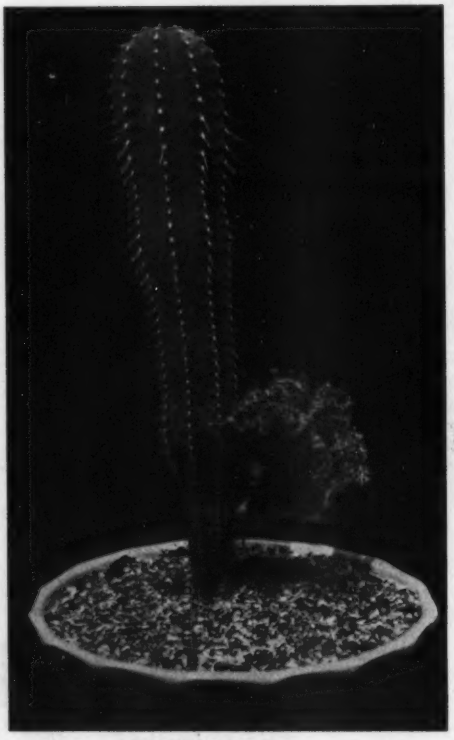

FIG. 2
Pilocereus euphorbioides (Haworth) Rümpler showing a remarkable form of fasciation. Photo by Haselton.

A REMARKABLE SEEDLING

By W. TAYLOR MARSHALL

The seedling illustrated is a five year old *Pilocereus euphorbioides* (Haworth) Rumpler grown by Gilbert Tegelberg and now in the author's collection.

When only one year old the remarkable side growth began to develop without in any way disturbing the normal growth of the remainder of the plant and since then both the plant and the abnormal growth have continued the even course of development, the seedling making as much growth each year as corresponding seedlings.

The side growth is a curious combination of cristate and monstrose growths. The cristate part is convoluted as usual and bears numerous fine spines. The monstrose growth is of two kinds—one bearing fine spines and othe other unarmed and is reminiscent of the "totem pole" form of *Lophocereus Schottii* monstrosus.

This side growth is setting down roots to attempt a separate contact with the soil and a small section which I removed from the mass and set in soil immediately rooted and is now growing rapidly but retaining its peculiar mixed form.

With the harnessing of atomic power well under way it is possible that some time in the future our scientists may be able to devote some time to the simple question, "What causes fasciation and what is it?" So far but little information is available on the subject and the few books available merely say, "We don't know" in 10,000 words or more.

$10,000 FOR OPUNTIAS

In University of Calif. Bulletin No. 691—Mar., 1945, entitled "Luther Burbank's Plant Contributions" by W. L. Howard, the author, on page 11 and 12, speaks of *Opuntia fiscus-indica* and *O. tuna* and, in part, says, "fantastic prices were paid for single slabs of new varieties. Burbank once sued an express company for $10,000 for the loss of a single shipment."

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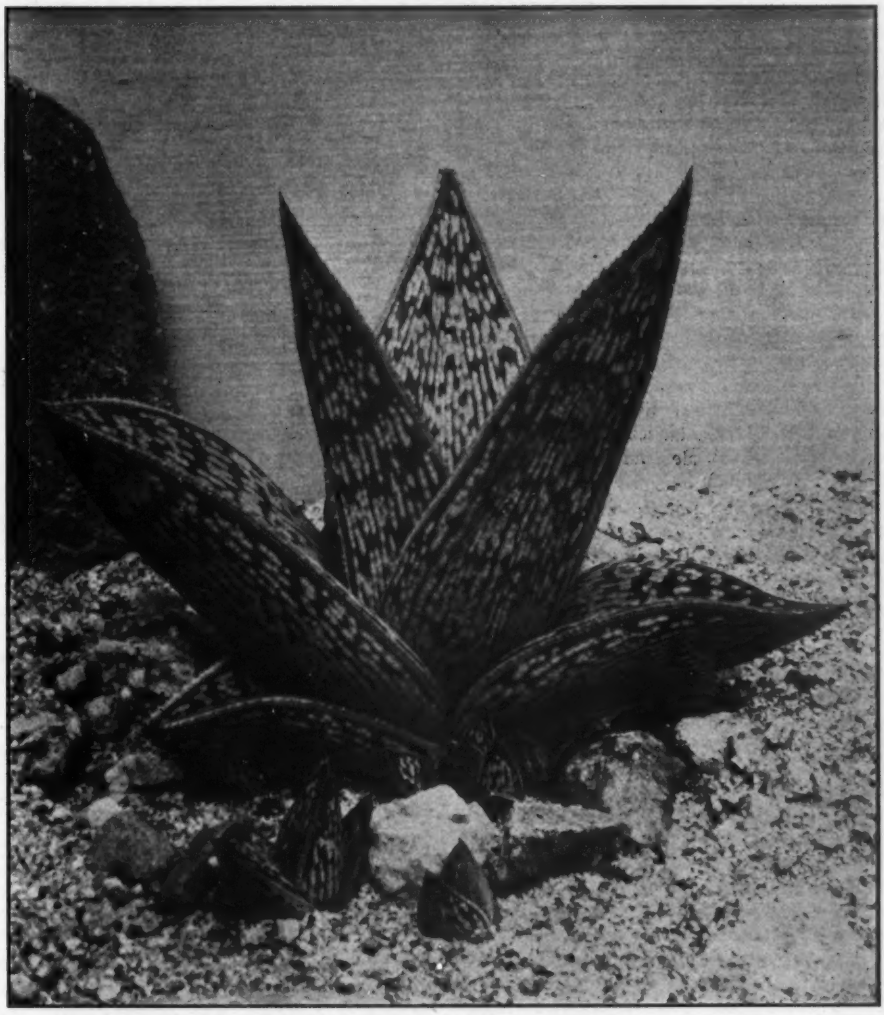

FIG. 3. *Aloe Sladeniana,* Pole Evans. Nat. size.

Aloe Sladeniana, Pole Evans

By J. R. BROWN

This handsome little Aloe will undoubtedly be a great favorite when it becomes more widely known and available. It is brightly colored and cheerful looking and seems to retain its fine clean appearance over a period of many years and may prove to be a plant very suitable for house culture.

It is a small plant varying from 4 cm. in height in the wild state to about 9 cm. in cultivation. The leaves which are 6-8 in number, are in 3 somewhat irregular rows, 7-9 cm. long, and 3-4 cm. broad, face concave, the back rounded and keeled. The color of the leaves is a bright pale green, plentifully spotted all over with oblong white spots which are more or less confluent in lengthwise rows, the confluent spots also in somewhat irregular transverse bands, especially on the upper part of leaves. The

whitish cartilaginous margins and keels with minute white teeth up to 1 mm. long.

The inflorescence is quite tall and erect, simple or 1-2 branched. The bracts 5-6 mm. long, deltoid-acuminate, 1 nerved; pedicels 15-20 mm. long and somewhat horizontal giving a loose and graceful appearance to the raceme of flowers.

Reynolds gives the color of the perianth as peach-red, but as the plants which so far have been observed here, flowered under glass, the color was much paler. All Aloes have much paler colored flowers when grown under glass and it is only when they can be grown in the open that the full beauty and coloring of the flowers is developed.

Aloe Sladeniana was discovered during the Percy Sladen Memorial Expedition of 1915-1916 in S. W. Africa: Nauchas, on granite, and was named by I. B. Pole Evans in Ann. Bol. Herb. III (1920-24) 13.

G. W. Reynolds in Journ. So. Afr. Bot. IV (1938) 105, Pl. 37. described an Aloe under the name *Aloe Carowii* but subsequently found this to be synonymous with the earlier described *Aloe Sladeniana,* but it was under this synonym, *Aloe Carowii,* that this little Aloe was introduced here.

In Mr. Reynolds account of this Aloe he mentions that Mr. Triebner had only found it growing on quartz hills under bushes, and that in addition to being found in the Nauchas Mts., Mr. Triebner had also collected it in the Zaris Mts.

Aloe Sladeniana is related to the well known *Aloe variegata* L. and to the lesser known *Aloe Dinteri* Berger, all of which belong in the sect. *Serrulatae* Salm Dyck. It is interesting to note that while *Aloe variegata* produces seed freely and also suckers freely, *Aloe Dinteri* seeds freely but produces no offsets, while *Aloe Sladeniana* forms no seeds but suckers very freely, soon creating groups. Mr. E. C. Hummel of Inglewood, California, who introduced this Aloe by obtaining plants from W. Triebner of Windhoek, S. W. Africa, and through whose courtesy I was able to photograph the plant, informed me that he had never been able to induce the forming of seed, and he also informed me that, in a letter, Mr. Triebner mentioned that he had never obtained seeds. So that it may be a plant which only under certain infrequently occurring conditions produces seed in the wild state, however, the copious supply of suckers somewhat compensates for this lack of seed.

This Aloe needs careful watering and should be kept rather dry and requires very little, if any, water during our cold months, otherwise it will soon rot and needless to say, it should be given as much light as is possible, but with some shade from the intense sunlight during the summer. The soil should be very porous, using quite coarse sand or small gravel to attain this.

MY NEWEST EXPERIENCES CONCERNING THE HYBRIDIZATION OF PHYLLOCACTI

By J. NICOLAI—Blasewitz near Dresden

Kakteenkunde, Volume IV, No. 9, September, 1894

Translated by EDWIN P. GUEGUEN

For more than 14 years I have dealt in the hybridization and fertilization of plants. In the cactus family I have especially chosen *Cereus, Phyllocactus* and *Echinopsis,* striving for prettier flowers of more gorgeous colorings in these genera. Now that the results of another observation period are at hand, I would like to share with others my experiences along these lines. The object of all experiments was that of producing in *Phyllocactus, Echinopsis* and *Cereus* new colors, larger flowers if possible, and a more willingness to bloom.

The first experiments with *Phyllocactus* and *Echinopsis* were made in Pirna in the exceedingly rich and at that time superior *Phyllocactus* collection of Mr. B. Bauer. After several years of cultivation the results of hybridizing occurring during that time may now be brought to light with 6 plants in 1893 and 32 plants in 1894.

The various species of *Phyllocactus* crossed with others of the same genus have in general produced plants whose flowers simulated the color mixtures of the parents in various combinations. For example: *Phyllo. crenatus* Erleri, a beautiful intensive violet-rose variety, becoming darker to red in the throat; P. Bergeri with flowers of a metalic dark copper-colored red, larger than those of Kermesinus magnus; P. Ulbrichtii, of brilliant rose to carmine, running into white down the throat; P. Postmaster Lang, a beautiful rose-red hybrid of imposing shade; P. Hempelii, dark incarnate-red, large flowering variety; P. Rülckerii and Boehmii are apparently the same hybrid—salmon rose; P. Keitii with dark orange flowers becoming still darker toward the edge of the petals.

Phyllocactus fruits which occurred through the crossing with *Echinopsis* varieties, produced beautiful plants in white colors, a few having a rose tint, or else yellowish white, of unaltered *Phyllocactus* form. For example: Phyllocactus Castneri, whose stem is terete from the base and whose flowers possess a strong odor; P. Frau

Adelheid Nicolai of a pure-white color, with rose tint from the middle of the petals into the throat, with petals arranged funnel-form and widely spreading, the branches mostly three-angled; P. Laarsenii, a pure-white flowering variety with narrow petals but of beautiful shape; P. Hauffii, with flowers of the finest snow-white color I have ever seen, 23 cm. across, of a wide cup-shaped form: P. Güntheri, a yellowish white flowering hybrid with a strong lilac fragrance. P. Gruss aus Blasewitz (Greetings from Blasewitz), flowers pure-white with globose stigma-lobes folded together, etc. I have named these hybrids in honor of a few cactus collectors who have shown a great interest in this work.

As to the plants produced by crossings with *Echinopsis* as the fruit parent, nothing conspicuous is noticed unless it be a somewhat shorter and more rigid growing habit, and flowers more freely produced, of a pure white color, in spite of the fact that the *Phyllocactus* parents had dark rose and dark red flowers.

Although the crossings of *Phyllocactus* as female and *Echinopsis* as male have been successful for me, the reverse of *Echinopsis* as female and *Phyllocactus* as male have always failed up until this year, but now for the first time, where I have been more careful in the selection of *Phyllocactus* species and used no hybrids, the attempt seems to have succeeded, however positive results will have to be decided by the future. In this type, examination of a few fruits which have fallen off disclose a remarkable swelling of the pollen-tubes in the interior of the fruit.

The fertilization of *Echinopsis* with *Cereus,* especially with *C. grandiflorus,* seems to be completely successful, since the seeds have all germinated well. Here too, however, time alone will tell.

The fructification of various *Cerei* with *Echinopsis* has so far completely failed for me, whereas the crossings of various cerei with other cerei have usually been successful. The flowers of hybrids of the latter type are already well known. A noteworthy quality of all plants raised from seeds resulting from such crosses, I have noticed, is that they grow stronger and more advantageously when they reach a certain size, always stronger stocked from the bottom, freer flowering, and producing larger and lovelier colored flowers, than their parents.

I can report nothing especially noteworthy as to selecting certain varieties more or less susceptible for hybridizing purposes; the varieties which fail, usually do so because the pollen grains are insufficiently strong to produce fertility of the ovules in the ovary. For crossing purposes I always choose the pollen from those stamens attached to the largest petals. These are generally the ones standing in a separate ring in the throat of the tube. The selection of these stamens has proven itself satisfactory by the fact that all plants produced by such fertilization have larger and finer flowers than the parent plants.

I shall publish later the results of experiments not yet completed.

Cacti in England

Part II continued from November

By E. SHURLY

Except in the warmest south and southwest cacti must be grown in greenhouses and must be heated in winter otherwise few survive although there are plenty of cases of old plants that have survived for decades and have grown into monstrous sizes. They are, however, the exception and the plants need all the care and watchfulness that would surprise you in America. When the war broke out fuel for heating greenhouses was made impossible and illegal and in consequence the cold greenhouses have killed, through frost, large numbers of plants and in my own case, my collection of 1000 Mammillarias with their varieties including numerous species novae was reduced by three quarters and my present collection is a pallid comparison in quantity and quality with my pre-war pride. I, and many others, are awaiting the opening of trade with America and the possibility of paying to get our collections up again. Export of money is strictly controlled. From the trouble I had to get my pre-war collection to its size I am wondering whether my life will be long enough, I am 57, to enable me to do so. I only hope we shall get the sympathetic help from your members when it becomes again possible.

Round about 1900 when Walton published his Cactus Journal there was a furore on cacti and a large number of plants were cultivated and most of the older collections with the large plants and the large isolated plants frequently met with, date from this period. It is interesting to note the comparison with newly imported plants of the same species. No one would guess they were the same plant. One old nurseryman in Norwich had apparently started in this period

and had a large stock of some of the commoner Mammillarias, such as *M. Wildii.* He kept his plants as mother plants and he propagated by cuttings and beheading his mothers. His greenhouses were a ramshackle collection of structures in between almost equally ramshackle houses getting poor light and very crowded conditions, but he had developed cuttings and beheadings into an art and he very successfully kept his business in cacti going. The present day specimens were unrecognizable as *M. Wildii.* He has now passed on to his long count and his stock may have been dispersed, but his lot was a perfect explanation of the appearance of cacti here. Spines lose all their colour and the glory of some plants disappear, plants flower very infrequently and quite a lot of species never bloom and anything like a general blooming in a collection of any quantity is a rarity.

It is difficult to make any generalities because there are always exceptions, but such plants as *M. magnimamma* and *M. centricirrha* (I hold them to be two different species) rarely bloom, but on the contrary I get *M. meiacantha* to bloom every year also *M. Heyderi.* The Wildii group are good bloomers and also *elongata* and *prolifera* and *multiceps,* but *Pottsii* never blooms. *Microcarpa, Milleri* and the like are not very successful bloomers. Generally speaking, with full reservations, the spine covered plants are good bloomers like *pseudoperbella,* but "bare" plants like *magnimamma, mammillaris,* etc., are not successful. It must be remembered that there are always exceptions and a certain situation and condition may produce a grower who does get these to bloom frequently. English greenhouses have ordinary horticultural glass which does not let through the vital rays and the plants suffer in consequence. The method of staging in greenhouses is usually antiquated and in consequence the freedom of growth, proper watering and many other essentials are neglected and the plants suffer.

My dream is that when things become stabilized I will be able to install a greenhouse of a type to my own liking, with glass right down to the ground instead of brick or wood up to about three feet from the ground and the glass to be vita type, letting in the vital rays. I also tend to like the semi-underground type so that it will obviate some of the frosty conditions in our winters. Another matter that I have not yet solved is matter of air which I consider responsible for more failures than anything else. Our greenhouses are expanses of glass with occasional windows. Mine is 24 feet long and has two windows at top and two windows below on each side, eight in all, but most greenhouses have only four in all. This means stagnant air and not the right condition. I kept Sempervivums once in my greenhouse and found I could not get them to grow until I put them near the window where they got a little more air. The new greenhouse of mine must have some means of free air by means of sliding sides, fans or something like that. I am dithering with the idea of concrete erections filled with soil into which I can put plants instead of the present pots which have to continually be repotted to prevent pot bind. I shall have to get down to this new idea and design my ideal greenhouse. Present conditions everywhere are hopelessly bad and from the American Journal I am not sure they are much better with you in areas where indoor cultivation is necessary. I am also thinking of thermostats and equable heating. Some program, but when I get more time to myself I am hoping for a fine collection and I want their living conditions to equal my hopes of their quality and quantity.

Again in the matter of watering, improvements can be made. At present there is the usual bucket of water and syringe, or the garden hose (banned in war time) that runs a continuous stream over everything in general and if the staging is not quite level the water runs down to one corner, stagnates and the plants are killed. Believe me, there is some thinking coming to those in this country before we get the ideal growing conditions.

Epiphyllums and similar plants seem to me to be an ideal culture for beauty of blooms. At present, only Ackermannii appears to be known here, although there must be quite a number of hybrids in private collections, but the genus is not a popular one, nor its associate genera. It is a pity, as the blooms take a lot of beating. One I have is an amazing bloomer. It suffered severely in our frost and lost all roots. It bloomed as heavily as ever although some of the cuttings were flat and dry because they had little or no roots with which to get nourishment! It was amazing. If I have the space I shall certainly get a collection of these plants, but their serious study, owing to the facility of hybridizing, presents a difficulty.

Frequently one comes across Echeverias, Sempervivums, Sedums and the like and they are very generally grown in this country, but outside of these, succulents seem to be sadly neglected except in private collections. There are quite a number of these in the country and usually good specimens and well worth the cultivating, but knowledge of them is seriously lacking.

I am afraid that these comments are not very encouraging, but until we get something more stable and helpful these conditions are likely to continue. Dealers and growers do not appreciate

the diversity and rarity of plants, they must consider the saleability of their plants and they find that a pretty plant sells better than a rarity and a queer looking plant attracts a certain class, but a plain but extremely interesting plant is dead meat so that they, for business sake, have to largely confine themselves to what they can sell most readily. Before the present Society was formed cacti conditions were deplorable in this country and it is largely due to the interest and enterprise shown first by W. T. Neale & Co., Ltd., of Worthing and later by the London Garden Stores that we have the diversity we have at present. I suggest that field searchers, growers and other dealers in the States might give the first named firm all the encouragement they can as they stand so alone in their enterprise. The latter firm is now out of business otherwise I would group them with Neales. Pre-war conditions might produce other enterprising firms, but we must await events. War and its restrictions has played havoc with our cacti and we can only look to your readers to help us out. Support the specialist above all, because it is he who provides the progress with our studies.

I must apologize for the repetition of Mammillarias in these comments but I think you know that I have so concentrated on these plants that my general knowledge of other cacti and succulents has diminished considerably and without the interest one does not notice the things that would hit the eye if they were his concern.

FROM ENGLAND

A recent article mentioned that collections here in England had diminished during the war years. That is certainly not the case with our collection. In 1939 we had only one specimen of the candle-plant (*Kleinia articulata*), whereas during the last four years our collection has increased very rapidly.

R. GREGORY.

I read with great interest the note on those peculiar flowers of *Phyllocactus Ackermannii* and *P. multiflorus* on page 124 of the 1945, September JOURNAL, as a similar thing has occurred with one of my plants—a fairly common, much-branching species of Mammillaria that I have not yet identified. During this summer it grew a flower bud, and when the bud was about four millimeters long, thin spines began protruding from its apex, and eventually a young stem appeared, pushing back the few young sepals which were two millimeters long, where they stopped growing and withered off at the end of the flowering season. The flower stem also ceased to grow. The offset now looks quite normal, except that it is on a globular green stalk two millimeters in diameter, which would have developed into a fruit in the ordinary way. Is it possible that an offset and a flower bud grew simultaneously, the offset growing through the flower bud?

G. R. ALLCOCK.

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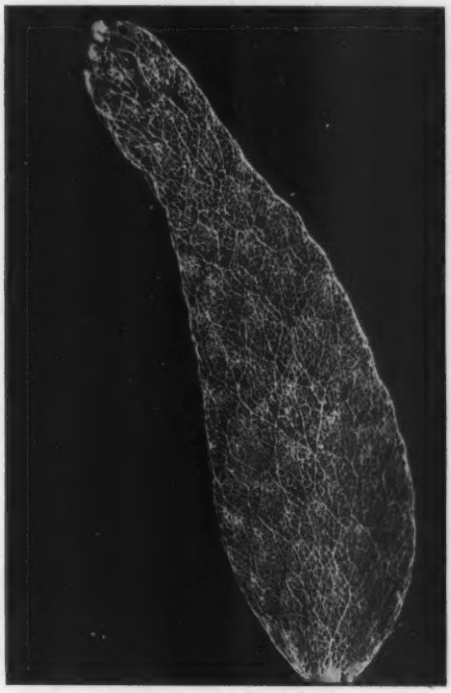

FIG. 4. The "skeletons" of the Cow Tongue (*Opuntia linguiformis*) cactus pads are composed of rich ivory-colored fiber. So intricate are the designs that the most skilled needle-worker would have difficulty in making a lace that would compare favorably with the delicate workmanship of the unusually lovely patterns found in the charming work of Mother Nature.

FIG. 5. Beautiful ivory "lace" from skeleton of the once ferocious cactus, has been made in unique collar and cuff set for Milady's use! Photos from Fitzpatrick Cactus Gardens, Edinburg, Texas.

Do You Know the Bromeliads?

By MULFORD B. FOSTER

PART III

Billbergia amoena is one of the most variable species of all the Billbergias. I have collected at least eight distinct phases of this one species. The form, size and color of the different phases differ quite widely, but the flowers do not vary so much. It is a good grower and easy of culture. The bracts are generally bright red and the flowers range from yellow to green with blue tipped petals. One new variety of this species which I discovered in Brazil, is the most spectacular of them all. The leaves, deep rose-magenta with light colored spots are in harmonious contrast to the white green flowers and delicate pink bracts which give the final touch that thrills the plant lover; its name is *B. amoena* var. *viridis*.

Billbergia horrida var. *tigrida* is an epiphytic Billbergia which attains its most striking character when grown in full light. Its "horrida" name refers to the large spines on the rich red-brown leaves marked with distinct horizontal gray bands. This is a distinctive, highly decorative plant the year around. While the flowers are nearly white and less showy than most Billbergias, they are interesting and fragrant.

Billbergia leptopoda is a new species I discovered in Brazil during 1940. It is a little gem that doesn't have to go to the beauty parlor to get its "permanent wave." Fantastically curled, the light blue-green spotted leaves form a decorative tubular plant which sends forth a sparkling inflorescence of red, blue and yellow.

I have picked at random only a few of the more interesting Billbergias that could not fail

FIG. 6

Billbergia horrida var. *tigrida*. An exciting bromeliad with a whirling rhythm in its rich red-brown leaves marked with bizarre hoizontal gray stripes. It is a distinctive and highly decorative plant even without its head of fragrant flowers.

to interest almost any plant lover. There are many more that need acquaintance.

AECHMEA

I am very much surprised that more Aechmeas have not found popularity in private collections. As a genus they are exceptionally beautiful plants and have longer lasting inflorescences than most of the other genera.

There are so many striking Aechmeas which make excellent subjects as house and conservatory plants that I hope some day to be able to cover them much more thoroughly than here.

They range in size from small pot plants to giants that weigh up to 100 pounds at maturity, have a great diversity of leaf and flower color, and have an unusually long sustained blooming period.

Among many outstanding Aechmeas, a few stand head and shoulders above the rest. *Aechmea orlandiana,* "The Finger of God" plant is one of these. I found it in 1939 on the Finger of God mountain in Brazil and I consider it one

FIG. 8
Aechmea orlandiana. The form of this beautiful urn-shaped epiphyte is both proudly erect and droopingly graceful. The striking maroon to black zebra zigzag mottlings on its green leaves make it a bizarre beauty without rival. The orange inflorescence holding white flowers comes in midwinter.

FIG. 7
Aechmea miniata discolor has an exquisite flower head resembling cherry-red berries topped by dainty blue "peep" flowers. The beautiful foliage is maroon on the underside but a soft, lustrous green on the upperside.

FIG. 9
Aechmea fasciata grows high in the Organo Mountains of Brazil. Although the lovely lavender flowers may be gone the exquisite cluster, a pyramid of pink bracts, remains for months.

of my greatest discoveries. The striking maroon to black zebra zig-zag mottlings of its green leaves make it a bizarre beauty without rival. The form of this plant, an urn-shaped epiphyte is both proudly erect and droopingly graceful. The orange inflorescence holding white flowers comes in mid-winter. It will stand much neglect and although it will grow in shade it prefers considerable light.

Aechmea miniata var. *discolor,* long known to plant fanciers, is blessed with a "double dip" in beauty. It not only is an unusually beautiful plant having glossy green leaves topside and lovely maroon on the underside, but has an unusual flower head like a cluster of scarlet berries holding dainty French-blue flowers. The whole fruiting head remains in bright color for several months. This Aechmea has been called the "Living Vase" because it can be used as an unusual flower holder when not in bloom. Different flower arrangements can be made by using the water filled leaf cups for holding the flowers. It is a plant that enjoys shade rather than sun.

Aechmea Racinae is an upright rosette of plain green shiny, narrow leaves. This unassuming plant sends forth as intriguing an inflorescence as you will ever see; it emerges from the center but hangs far below the plant itself with a brilliant red berry-like cluster of flowers that hold brilliant yellow petals accented with a black splotch at the base. It looks like a cluster of beads or jewels and thus has been called "Xmas Jewels" for, happily it blooms at Christmas and carries on in beauty for months. This very different Aechmea was named for my wife, Racine Foster.

Aechmea fasciata, was, for years, sold both in Europe and America under the name of *Billbergia rhodo-cyanea.* In fact most bromeliads have been called Billbergias regardless of their genus. *A. fasciata* blooms in the summer but its lovely head of delicate pink bracts lasts for nearly six months; this to the layman's eye looks to be in full bloom. The flowers, nestled between these pink bracts are of a delicate lavender-blue color which turns pink, then lavender with age. So you have a changing pastel palette in the flower head. The upright, rather stiff green leaves, beautifully banded with white-gray markings create a perfect urn-shaped plant that is ideal for a living flower vase when not in bloom. In 1940 I found a color phase of this same species; it differs only in that the leaves are of maroon-green instead of light green.

Aechmea nudicaulis var. *cuspidata,* from a decorative standpoint, is quite an outstanding Aechmea and its xerophytic qualities insure it a place in the rock garden as well as in the home. It will stand full sun; in fact, I found it grow-

FIG. 10

Aechmea Racinae (Xmas Jewels). This unassuming plant of plain but shiny green leaves sends forth a most intriguing inflorescence which hangs far below the plant with a brilliant red, berry-like cluster of flowers with yellow petals accented with a black spot at their base.

ing on sand dunes but a few feet away from the Atlantic Ocean on the coast of Brazil. I believe it will stand more punishment and neglect than almost any Aechmea I have ever known. This species of *A. nudicaulis* is quite variable. I have collected the plain green form where it grows in Mexico and Trinidad and from its outward appearance one would never think that this variety *cuspidata* from Brazil was the same species as the one from Mexico.

The plant is quite stiff and strikingly banded. In full sun it assumes a very gray-brown-green color, and even as a young plant, when but a few inches high, it shows nearly all of the character of the mature plant.

Aechmea marmorata is, for thrilling beauty in pure form a plant "out of this world!" As an artistic plant it can hardly be excelled.

The stiff and formal leaves fan out from each side and do not come out in a spiral whirl as in the other bromeliads. This form gives it all of the silhouette style and class of a "traveler's palm." And it keeps its shape perfectly in any well lighted spot. Its center bud-vase-like tubular form, of course, continually holds water and the whole plant lends itself as a decorative feature both for its own form with or without its own flowers; or it can be used as a vase for cut flowers.

The upright leaves are a lovely blue-green with a mottling of maroon spots. A few weeks before its spring blooming season, a lovely fruity fragrance is given off from the center tube, although, strangely, the flowers themselves, when they appear, do not have any perfume. The blue petalled flowers of this stylish plant appear on a semi-branched inflorescence decked with long, delicate pink bracts.

Cultural requirements of *Aechmea marmorata* are as simple as the other bromeliads, yet I find no record where it has ever been in cultivation in this country. It is practically unknown to horticulture.

To be continued

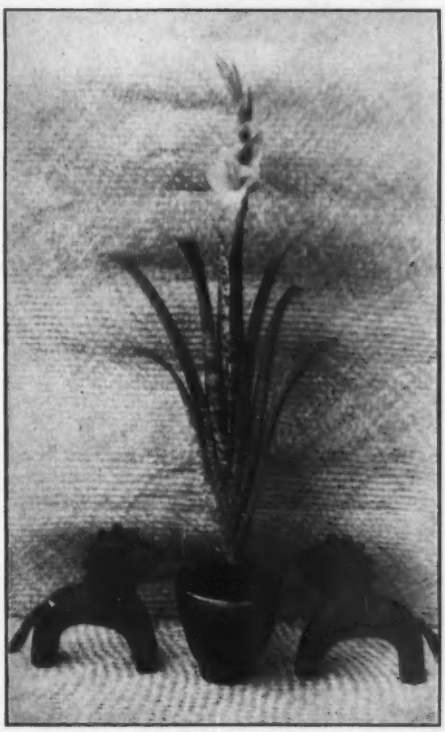

FIG. 11

Aechmea marmorata. Even a veteran florist couldn't help but admit that this tops all vases in his experience; a living "Grecian vase" with all the grace and symmetry that even the most classical artist would have a hard time trying to reproduce. It is shown above with a spike of gladiolus in its center cup.

FIG. 12. (Left) *Bryophyllum Gastonis Bonnieri.* (Right) *Aloe candelabra*—fifteen years from seed. Both plants grown and photographed by E. O. Orpet.

TWO INTERESTING SUCCULENTS

Pictured above (left) is one of the species of *Bryophyllum* brought from Madagascar when our Government explorers in company with the French authorities were in search of the famous Rubber Tree. This tree was almost exterminated in its habitat, and does not do well here, being too slow and hard to propagate. But these Bryophyllums in their many varied forms have proved delightful subjects here in California for outdoor adornment and for other uses elsewhere. The species under consideration is one rarely seen in flower, it takes two years of good cultivation away from frost and too much rain in winter here, but given protection, the spike of flowers and the highly colored Chinese-lantern-like corolla is a thing of beauty for over two months, and even now when dried it is an attractive specimen often calling for comment.

We find that no seeds are produced from the many flowers, but the plant does not require this, for each leaf as it bends down to the soil begins at once to make little ones at the apex of each, soon readily rooted, and these grow fast. It seems however, that it takes the second year to complete the cycle of growth to flowering age, but it is well worth the time spent for the duration of the flowering effect.

Our plant was received with the original distribution of the Bryophyllums from Washington; it is seemingly the least known in cultivation but we write to make it better understood that more may try it.

E. O. ORPET

NOTE: See JOURNAL, Vol. XIV, No. 8.

FROM AUSTRALIA

I have added a large number of plants to my collection the past year and when I know which kinds will stand up to our humid climate will just concentrate on a few species. A number of plants have to be replanted each year because they would soon overtake everything else in the garden. Thus, *Bryophyllum tubiflorum,* although beautiful when in bloom (I have a patch with over fifty flowers at present, from 2 ½ to 5 feet tall) is a pest. LESLEY J. LOVE.

AFFILIATE NOTES

Address your Affiliate Notes to Chas. Place, 5048 Hook Tree Rd., Rt. 1, Box 388 T, La Cañada, Calif.

Another year has rolled around and it affords the Society the greatest pleasure in wishing for you a Happy and Prosperous New Year and also in welcoming our newest Affiliate, The Amateur Cactus Society of Chester, Illinois.

Mrs. Ella Nipper (Pres.) writes:

"The Amateur Cactus Society of Chester, Ill., held its first meeting Oct. 31, 1945. The officers are: Mrs. C. W. (Ella) Nipper, President; Mrs. Edward Fey, Vive-President; Miss Norma Berry, Secretary-Treasurer; Mrs. Walter Decker, Reporter and Publicity; Directors are: Mrs. Arnold Wiebusch, Mrs. W. E. Bienke, Miss Selma Decker. While the first meeting was confined mostly to business we did have some interesting questions on cacti. We also reviewed the Cactus and Succulent Journal, October issue and The Cactus Digest, and some very interesting pictures of Mrs. Nipper's prize winning cacti. This was followed by a dinner, introducing a cactus and lettuce salad. The cactus fruits used in the salad were grown by Mrs. Nipper."

A great chance for a new style Victory Garden.

Mr. E. Worthington (Pres.) writes:

"The Amateur Cactus and Succulent Society of British Columbia held its annual election of officers at the November meeting. Mr. Worthington was returned to the presidency; Mr. J. Benson, Vice-President; Mr. R. G. Shaw, Secretary-Treasurer; and Messrs. A. E. Marchanton and T. C. White, Directors. Following the election the president stated that he would continue to look after the publicity work of the club and that a program convenor would be appointed later. A general discussion took place on ways to make the club more attractive to new members, particularly window gardeners, who are the greater percentage of cactus growers in Vancouver. It was decided to have a short talk at every meeting covering some of the rudimentary ideas of cactus and succulent growing, in addition to a talk covering more advanced work. Also that business be cut to a minimum at each meeting. The Secretary was instructed to procure the latest catalogues available, with a view to the members sending a joint order for plants in the spring. We are wishing all our cactus friends wherever they may be a Happy New Year from all here in British Columbia."

Same to you and many of them.

Mr. C. L. Wiese (Pres.) writes:

"The Oklahoma Cactus and Succulent Society was entertained on November 15 by Chas. and Mary Polaski with colored picture films of the Bellingrath Gardens. Charles and Mary have their own camellia house with fancy plants in bloom now. Our city conservatory, destroyed by fire last spring, is now approaching completion and the Cactus and Succulent section sponsored by our Society is rapidly becoming a show-place and attraction in beauty of design and variety of plants, thanks to our member, Clyde O. Pulse, who contributed so generously in plants to replace those destroyed by the fire."

Congratulations on the new Conservatory.

Mr. G. W. van der Bundt (Cor.) writes:

"The Cactus and Other Succulent League of Oakland, held their yearly Christmas meeting December 2, at the club room of the home of Mr. W. Andrews. The room was decorated, including a Christmas tree. At this meeting each member brought a plant (decorative) which was distributed by drawing. Mr. Butterfield and your correspondent told of their experiences in the use of D.D.T. on cacti. Good results were had with spine bug, mealy bug, ants and scale. The control of ants in the greenhouse is a boon as they cannot spread the bugs when they are under control. Your correspondent used 20 p.c. solution of D.D.T. and used 1 teaspoon to a quart of water. No damage was done to any of the plants sprayed."

This column will welcome further information along these lines.

Wava K. Frye (Sec.) writes:

"The Detroit Cactus and Succulent Society is anticipating a national convention. Anything definite? At our October meeting action was taken to form a reference library purchased by assessment of fifty cents a member for a library card. At the same meeting the books owned by individual members were loaned for a month to other members. This society displayed an attractive exhibit at the City Harvest Festival, held on Belle Isle, August 25, 26, 27, with Anthony Barone being awarded the prize for the best cactus. The home of the Detroit Garden Center is on Belle Isle in a twelve room house with an adequate library, kitchen equipment to serve sixty people and cases and tables for exhibits. The Director, Mrs. Geo. Bouton, reserves the entire building for the Detroit Cactus and Succulent Society on the second Sunday of each month and our Society is fortunate and appreciative of this service."

National Convention—Cincinnati, Ohio, June, 1947.

From the Bulletin of the Southern California Cactus Exchange, Muriel Merrell, Editor:

"On November 18th Mrs. Aschenbrenner shared the pleasantries of her recent trip through Mexico with us. At the December meeting the officers elected for the coming year were: President, Mrs. Elsa Mark; Vice-President, Mrs. Lilly Grimes; Secretary, W. O. Bright; Treasurer, Frank Mark; Trustee, Jack Ginter."

From the Cactus Digest of the Henry Shaw Cactus Society, Ladislaus Cutak, Editor:

"Motto for the next year, 'I resolve to attend every meeting and take an active part in the affairs of our Club.' Officers for 1946: President, Carleton G. Blandford; Vice-President, Mrs. L. Arthur Frank; Recording Secretary, Mrs. W. H. Fruehauf; Treasurer, Al. K. Lorenz; Librarian Historian, Mrs. C. G. Blandford; Editor, Ladislaus Cutak; Directors, Miss Bathildes Helmer, Elmer Barnes, Jesse Austin.

Excerpts from Cacto-graphs, by L. Cutak:

"When we speak of cacti we usually bring to mind prickly desert plants that grow under adverse conditions in the hottest and driest regions of the western world. Little do some folks realize that there is a group within the family that shuns locations of this kind and prefers to hobnob with jungle orchids, ferns and other shade loving plants instead. Yet this is the case with the unique Rhipsalis, a true cactus that does not resemble a cactus of our imagination. The genus *Rhipsalis* is native to the American tropics, has about 60 members in its select set. All of them prefer upper apartments but occasionally will condescend to live on the first floor when they have no choice. Sometimes birds or other animals deliberately or accidentally eject them from their high perches on the trunks of tall forest trees or they may topple down to the ground of their own weight. But they can live as successfully on the jungle floor as in penthouses. It makes no difference to them in the least. About half of the Rhipsalis clan possess slender cylindrical stems while the the other half delight in angled or much flattened, leaf-like joints. As a rule the flowers of this particular cactus group are rather small in comparison with other cacti, but nevertheless are dainty and showy when produced in abundance."

January 1. Looked over my large Agaves which I acquired before I knew those delightful little gems for pot culture: *Agave americana, O atrovirens, A. americana variegata, A. decipiens, A ferox* and *A. neglecta.* Most of these I have left in the same pot for five years or more and so they have been forced to remain small, surrounded by numerous suckers. Starvation diet reduces them to "pot plants." I cut off all roots which come through the drainage holes. Look at pictures of these plants in botanical collections with envy, but I don't have the room, so keep mine miniature by starvation and root pruning.

January 3. New Years, 1946, past with those Agaves with smallness, compactness and intricate patterning, checked and OK'ed. Never have "let me down" winter, summer, spring or fall. Armored? Yes! Uninteresting? No! Found *A. filifera* first in my affection. Much like *A. Ferdinandi-regis* (*A. Nickelsiae*), but with long white hairs along the leaf edges. *A. mediopicta* a beauty. His central yellow band. Gift from A. S. Harmer, Dieringer, Washington. Wrote me he has many of the rarer types. Mrs. Bakkers lists this type as a variety of *A. americana.* Hope I don't have another giant on my hands to starve down to my specifications.

January 5. Removed two suckers from *A. Ferdinandi-Regis* which was sold to me as *A. "Nickelsiae."* So far this plant appears to be a much less symmetrical one than *Ferdinandi-Regis* at least in my collection. Has a white semi-translucent edging which breaks away and gives the plant a lacy look. Potted the offsets for trading in the spring to get more "pot-sizes-species."

January 8. Agave macrantha seedlings are grayish green. Black spine which tips the leaves is decorative. *A. Shawii,* native to Lower California and Southwest U. S. A., has ten leaves. R. N. Fiske collected the seed along the edge of the Grand Canyon of the Colorado. Geting along with ten others beyond the size I can house conveniently under my benches. Then I ask myself which ones shall I give away? My mind is made up until I look at my Agaves, then I relent. No, sir! I'm not giving any away. Where'll I put the new species? I'll find a place you can bet. Oh, yes, I did refuse two Americanas with a five foot spread!

January 12. Used *A. Lechuguilla* "that fiber giving species" for my decorative section. Has leaves twisted both sideways as well as above and below like a crease with a serpentine blade. *A. attenuata,* that smooth-edged members of the Agaves has long been a favorite of mine. Leaves are a bright green, smooth and free from those "toothed-edges." Has a tendency to become stemmed as it loses its leaves.

January 18. Bulbil from a former Clevelander's *Agave americana* which he sent me from the Florida everglades growing in small pot. Grew about 18 feet upon the bloom stalk. The mother plant also was surrounded with suckers from the "roots." Old plant finally expired after 15 years in open ground with daughters to repeat the double method of increase. So far I've been "fortunate" or "unfortunate" enough to have no Agaves bloom. In 1936 I exhibited an *Agave americana* with a 12 foot stem in full bloom at the Great Lakes Exposition. Grew in a barber shop and developed the flower stem. It was a sensation along with our 1,200 xerophytes.

January 23. Mixed Agave soil for next month's potting spree. Used 3 parts of decomposed leaf mold, one part of broken Ohio clay (some go so far as to ask me what else I could use in Ohio), which I put through a quarter-inch mesh screen, and one part of river sand. I have found that our local seed and pet stores handle the best sand. When I repot them I shall press this soil about the fleshy-roots of my plants. Have a tendency to push themselves out of the pots, so loosening is not difficult when ready to repot.

January 26. Checked for the third time the storage temperature of my Agave plants stored under my bench which faces S. E. Yes, sir! Stays 45° to 50° temperature even in the coldest weather. So far I have not been able to obtain *A. utahensis.* Hardy in its native habitat Northeast U. S. A. Would let it grow if I had it beside my *Yucca filamentosa.* Watered them for the fourth time this month. Never overwater these plants here where the Great Lakes "smog" is with us from November to late February. Water the seedlings oftener if the sun shines. Like to keep them growing, but not enough to lose their rosette shapes. *Agave Victoria-Reginae,* my favorite for pot culture, growing slowly but has promise of a fine rosette. Fills a four-inch pot right now. Its white markings on dark green make it a show plant even with those other colorful succulents.

January 29. Read in "Succulent Plants of New and Old World Deserts" by E. J. Alexander, "There are only two forms of inflorescence, a spike (or a raceme) and a panicle (branched inflorescence). The flowers are mostly greenish with a few yellow or orange ones for variation, so that their decorative value lies in their form rather than in their flowers. The name century-plant has been applied to most of them in the mistaken idea that they flower when a hundred years old but in actuality the plants usually flower at from 10 to 50 years of age depending upon the species also upon the growing conditions."

January 31. Bought my *Agave pumila* three years ago from Louis Feher, a young and enthusiastic cactophile dealer. He quoted specifications for this midget "one inch triangular, gray-green leaves which even in its adult stage vary between 5 and 8. Never grows much more than one-inch high." After three years mine still stays near enough to these specifications to be *A. pumila*—one of my rarities as well as a favorite. Have it in a three-inch pot of regular Agave potting soil and it is healthy. Grew all of my "pot sized" Agaves under the filtered noon time shade of my grape arbor. The "giants" were in full sun for the greater part of the day. Nature cared for them, I didn't and whether it is a dry or a wet summer I never worry. My Agaves are my hardiest for all but the winter months.

(Next month Bryophyllums)

A NEW SUPPLY

"The Cultivation of Succulents" by Jacobsen is again available. This 104 page book was translated from the German by Vera Higgins and provides general cultural directions including chapters on: Imported plants, Seed production, Propagation by seeds, Vegetative propagation, Diseases and pests, and Labeling. There are 8 pages of illustrations. Price$1.65 postpaid in U.S.A. Foreign $1.75.

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SPINE CHATS

LADISLAUS CUTAK

With this issue SPINE CHATS begins its fourth year of service. We will continue to give you gossip about cactus people and comments about desert plants or anything connected with them. It isn't always easy to ferret information such as is found in this column but by persistent effort we do manage to glean quite a bit of valuable knowledge and then pass it on to you. That this service is appreciated is shown in the many letters written to the Editor and to this columnist.

* * *

The collecting of cacti first asserted itself in Prof. Arthur Blocher's life, when as a Boy Scout he came upon a bed of native Prickly Pears on a camping trip east of Amboy, Illinois. He was so intrigued by the spiny pads resplendent with glorious blooms that he dug up a few clumps and carried his precious treasures home, where they have lived, bloomed and prospered every year. Although the love for cacti had asserted itself in those tender years of boyhood, the real fever did not hit him until his visit to the Century of Progress Fair in Chicago in 1933, where he could not draw himself away from the Arizona building. It was then and there that he decided to collect cacti on a large scale. Since then he has amassed a collection of about 2500 plants, of which 800 are distinct species of cacti and 300 of other succulents. During the summer months these potted plants are plunged into sand beds outlined with a conglomerate collection of rocks from various States. The cacti are arranged in separate beds to represent native groups of Mexico, California, Texas, Arizona, New Mexico, Colorado, Oklahoma and South America. The South African succulents have a bed for themselves. In the winter, the plants are taken up and stored in a large greenhouse.

Prof. Blocher has made six trips to the Southwest, each time bringing home a considerable number of plants to augment his collection. He has collected them in the field, exchanged duplicates with other cactophiles and bought specimens from various dealers. He always keeps on hand a large stock of duplicates for exchange purposes or to start off a new cactophile in his hobby. He is also an interested rockhound and believes that his rock collection is as valuable as his plants. It consists of petrified wood from various States, geodes, coral, fossils, banded rocks, Iceland spar, travertine and many other kinds. As mentioned earlier, this rock collection adorns the cactus beds in summer and serves to hide the pots as much as possible.

Art Blocher is a musician by vocation and as such is a rather busy man. He teaches, instructs and supervises Bands in five different schools and therefore is away from home at least five days a week. During the school season he is at home only on weekends and he finds getting into his cactus garden a real relaxation from the strenuous exercises of his musical career. Arranging band concerts, contests, festivals, various civic drives and music at athletic games is a constant strain on his nerves but he loves the work and takes it very seriously. Even though he knows that many of his pupils will always bring honors home, he still; literally, "wears out the seat of his pants" at all contests. In his cactus collection he finds the mental relaxation that refreshes him for this kind of work.

Mr. Thomas MacDougall of New York City stopped off at the Garden on his annual trek to Mexico. He is a landscape nurseryman with a penchant for cacti and succulents, particularly of the Epiphyllanae and Echeveroideae groups. Since his work is very slack during the winter months, he has been making annual trips to Mexico for the past 16 years and collecting in little known localities on the Isthmus of Tehuantepec. He has unearthed interesting facts about little known species, or those widely known in cultivation but seldom recorded in the wild. He has also discovered a number of new forms of Echeverias, Graptopetalums, Sedums, Pseudorhipsalis and other ornamentals, some of which, like *Lobeira MacDougallii* and *Graptopetalum MacDougallii* bear his name. His observations are now being recorded regularly in the CACTUS JOURNAL. Mr. Clifford Poulsen, an orchid fancier, formerly in the employ of the New York Botanical Garden, is accompanying Mr. MacDougall on this present trip.

* * *

Mr. Phil Rau, member of the Henry Shaw Cactus Society and well known in the entomological world, has a very interesting paper, "The Yucca Plant and the Yucca Moth" published in the current Annals of the Missouri Botanical Garden (32: 373-394, November, 1945). In this elucidating paper, Mr. Rau briefly reviews the masterful work done on this subject by the late Prof. Charles V. Riley and his colleagues, who had uncovered the many intricate and almost unbelievable details of the behavior of the moths at the flowers and discovered that neither plant nor insect could perpetuate itself without the other. Mr. Rau has verified much of Riley's work by his own keen observations and at the same time stumbled upon additional facts on the behavior and the ecology of both insect and plant. The silvery-white Pronuba moths appear just as soon as the flowers open and no sooner and may be seen within the blossoms during the entire blooming period of 20 to 27 days. Rau has discovered that the moths are attracted to the flowers by the sense of smell and that the larvae do not necessarily hibernate in the soil in the immediate vicinity of the plants. Further he believes that the larvae are influenced by temperature conditions and their emergence coincides with the opening of the Yucca flowers. This remarkable moth, *Tegeticula* (*Pronuba*) *yuccasella*, is short-lived and takes no food. It spends its adult life within the full-bloom perianth, where mating takes place and where the female gathers pollen and deliberately uses it to impregnate the ovaries of the plant so that food for her young is created.

* * *

The shortage of much vital raw material of various sorts during the war period had stimulated research work in all kinds of fields. Even the Hottentot Fig, botanically *Carpobrotus edulis*, was considered as a potential source of tannins of the catechol or phlobotannin type. This tannin could be used in the manufacture of leather and on the basis of existing stands, it was estimated that under average growing conditions about 50 to 60 tons of the fresh plant could be harvested per acre, yielding approximately 1500 pounds of the tannin.

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